

IN THE CLAIMS:

Please cancel claims 1-31. Please add new claims 32-36 as follows:

32. An antibody having specific affinity to an osteoclastogenesis inhibitory factor protein comprising the following properties:

- (a) molecular weights as determined by SDS-polyacrylamide gel electrophoresis (SDS-PAGE) of approximately 60 kD under reducing conditions, and approximately 60 kD (a monomer) and 120 kD (a homodimer) under non-reducing conditions;
- (b) high affinity to cation-exchange resins and heparin derivatives;
- (c) inhibitory activity for osteoclast differentiation and/or maturation, wherein said activity is decreased by heating said protein at about 70°C for about 10 min. or at about 56°C for about 30 min., and wherein said activity is lost by heating at about 90°C for about 10 min.; and
- (d) an internal amino acid sequence as provided in SEQ. ID NOS. 1, 2 or 3.

33. The antibody of claim 32 that is polyclonal.

34. The antibody of claim 32 that is monoclonal.

35. The monoclonal antibody of claim 34 being characterized by the following properties:

a molecular weight of about 150,000, and of subclass IgG₁, IgG_{2a}, or IgG_{2b}.

36. A method of determining the concentration of an osteoclastogenesis inhibitory factor protein comprising contacting a sample suspected of containing said protein with an antibody of claims 32, 33, 34, or 35 under conditions sufficient to induce formation of protein-antibody conjugates, and detecting the amount of protein-antibody conjugates formed.